

Quick Start Guide

V 1.0



Self-Stabilizing 4K Camera

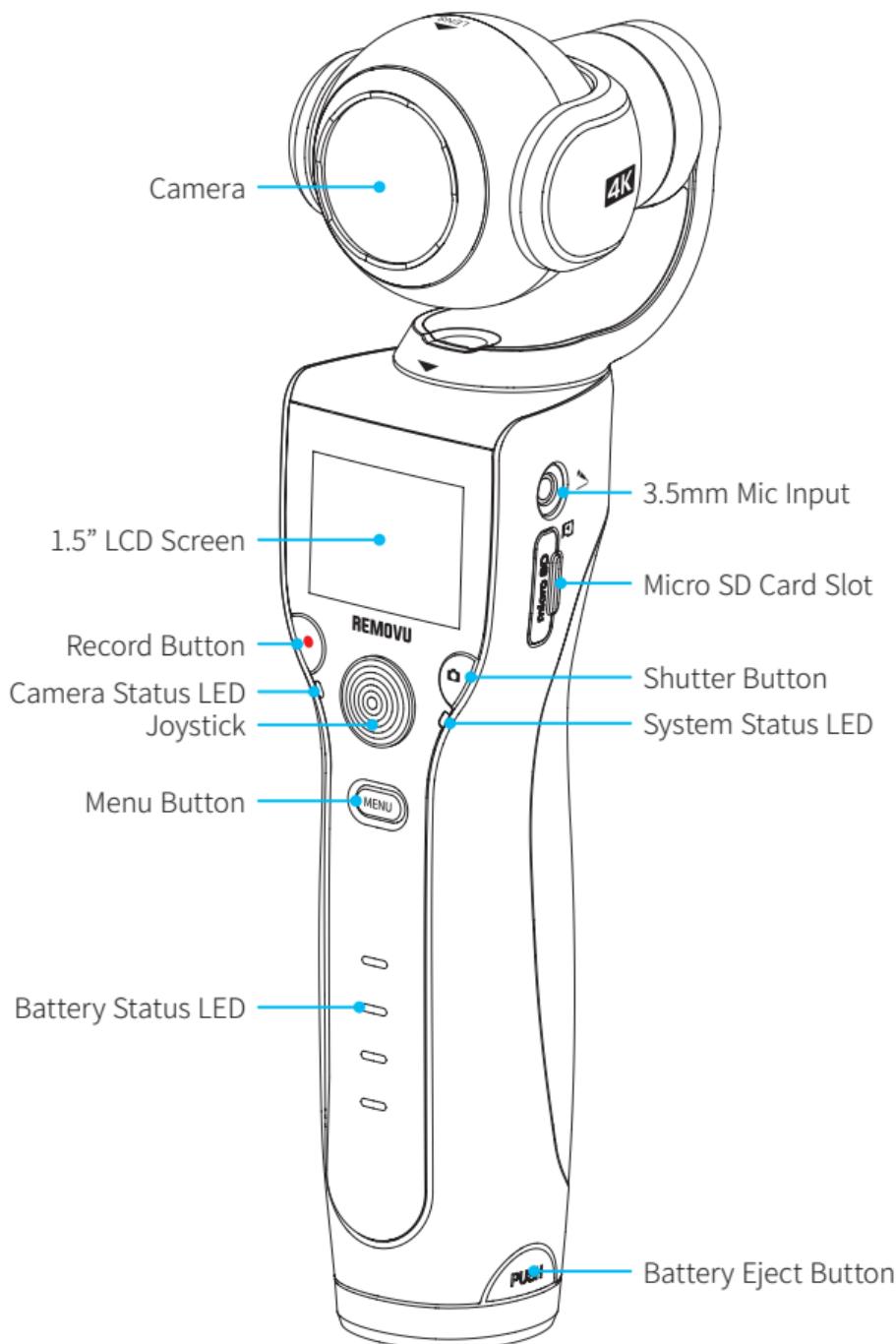
REMOVU[®]

Overview

REMOVU K1 is a 4K Camera with an integrated 3-axis gimbal. It is lightweight, portable, user-friendly and affordable.

To ensure that everything is in the shot, the K1 has a custom designed F2.8 wide angle lens. It shoots sharp 12MP photos and stable video at up to 4K. With the built-in 1.5" LCD screen, you can preview and playback recorded videos and photos instantly. The K1 uses a powerful interchangeable smart battery, that provides up-to 4 hours of continuous filming on a single charge.

Parts



In the Box



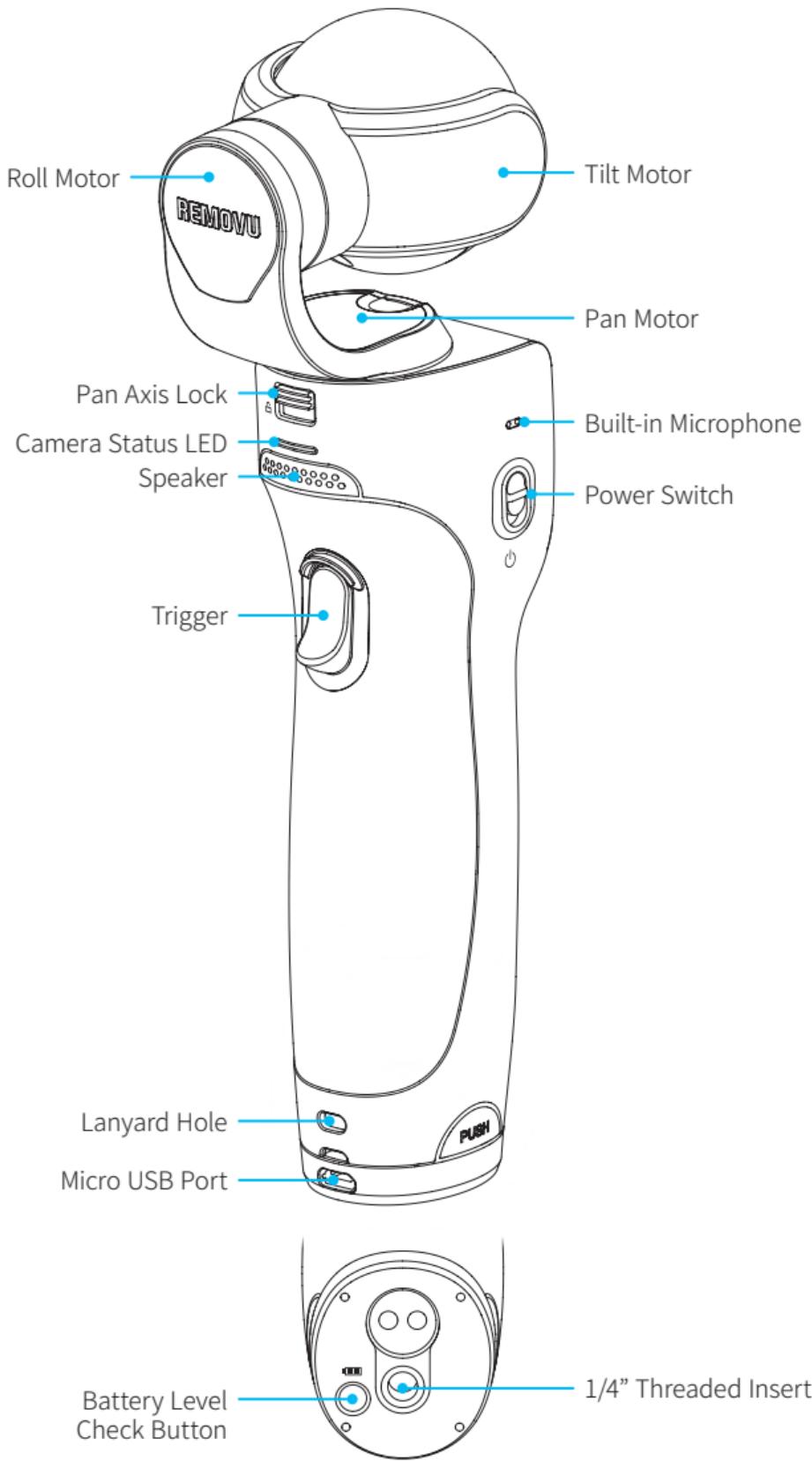
K1 x 1



Pouch x 1

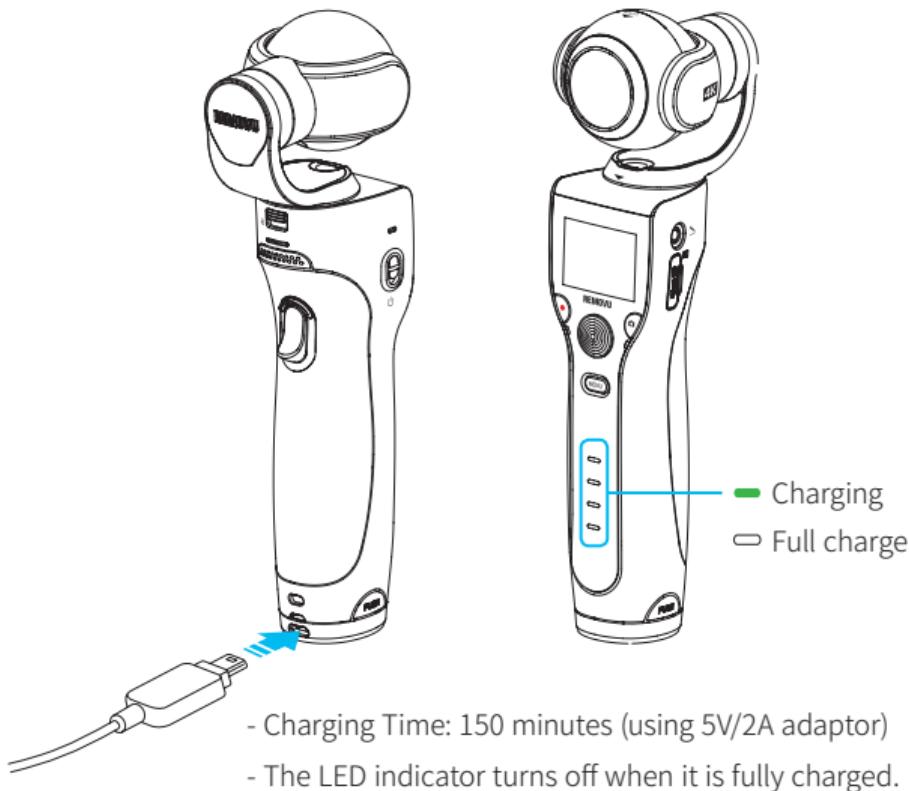


USB Cable x 1



Prepare the Battery

Fully charge the battery before using it for the first time.

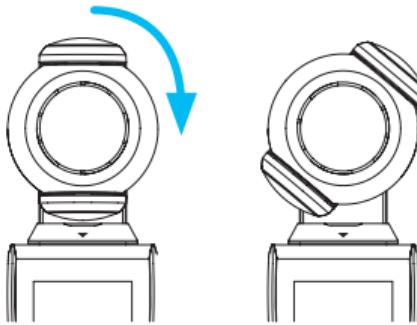


- Charging Time: 150 minutes (using 5V/2A adaptor)
- The LED indicator turns off when it is fully charged.

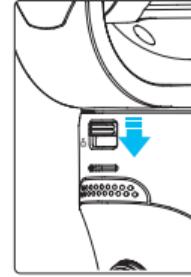
Getting Started

Unlock the Gimbal

1. Rotate the roll motor.



2. Slide the pan axis lock down.



Powering On and Off



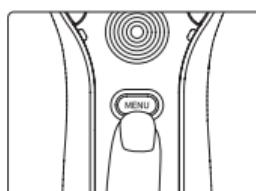
Slide-down and hold the power switch to turn the device ON/OFF.

Release the power switch once the device has turned ON/OFF.

Install the REMOVU K1 App

Search for 'REMOVU' in the App Store or Google Play to download the app onto your mobile phone.

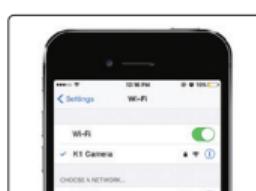
Connecting to the K1 App



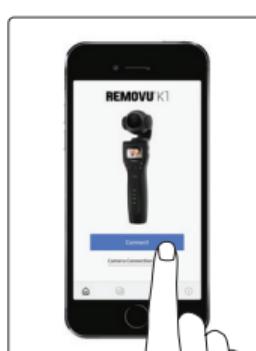
1. Power on the K1.
2. Press the 'Menu' button on K1.



3. Select 'Camera Settings' on the menu.
4. Turn Wi-Fi on.

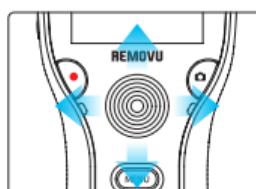


5. Turn on your mobile's Wi-Fi and connect to the K1 Camera.
(Default password: 12345678)



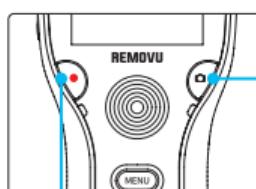
6. Launch the K1 mobile app and tap 'Connect'.

Controls



4-Way Joystick:

Use the joystick to pan or tilt the camera.

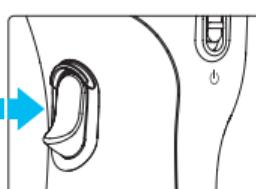


Shutter Button:

Press once to take a photo.

Record Button:

Press once to start recording and press again to stop recording.



Trigger:

- Tap once to switch between Pan and Follow mode.
- Tap twice to set the camera to the default position.
- Tap three times to go in/out of Selfie mode.
- Hold and use the joystick to zoom in/out.

Specifications

Camera

ISP	Ambarella A12S75
Sensor	1/2.3" CMOS 12MP (Sony IMX377)
Lens	F2.8 FOV 101°(D)
Focus	Suitable range 50cm to ∞
Max Image Size	4000 x 3000 pixels
Still Photo Modes	Single Shot Burst Photo Timelapse Photo (Normal, Motion) Panorama Photo (F/W Updated)
Video Modes	Video (Normal, Motion) Slow Motion Video (Normal, Motion) Timelapse Video (Normal, Motion)
Video Resolution	4K (3840x2160) @ 30fps WQHD (2560x1440) @ 30/60fps FHD (1920x1080) @ 30/60/120fps HD (1280x720) @ 30/60/120/240fps
Supported Memory	Micro SD (UHS-1 U3) up to 256GB (max)

Gimbal

Mechanism	3-axis BLDC motorized gimbal
Active Range	Tilt : -48° to +108° Pan : -75° to +255° Roll : -60° to +60°
Angular Vibration Range	$\pm 0.03^\circ$

System

Battery	Attachable Li-ion 2,900mAh (10.7Wh) Direct charging by USB Cable (charger not required)
Operating Time	4 Hours Continuous Recording (1080p@30fps, Wi-Fi Off, LCD Off)
Dimension	5.8 x 7.0 x 21.6 (cm)
Weight	340g (including Battery)

Smartphone App

Connection by	Wi-Fi Direct (2.4GHz)
Supported OS	Android iOS
Functions	Live View (Preview) & Playback Remote Control Camera & Gimbal Firmware Update

Safety Guidelines

Before You Begin

The following documents have been produced to help you safely operate and make full use of your K1.

Check that you have all the included parts listed on “In the Box” first. Read the entire user manual and watch the tutorial videos on the product page of the official REMOVU website before you begin to use K1. If you have any questions or problems during the installation, maintenance or use of this product, please contact REMOVU or a REMOVU distributor.

Caution

1. Intricate components inside the K1 may be damaged upon impact and cause the gimbal to malfunction.
2. Before **using** the gimbal, be sure to **unlock the roll motor** and **unlock the pan axis lock**. Otherwise, the gimbal may become damaged.
3. When **storing** the gimbal, be sure to **lock the roll motor** and **pan axis lock**. Otherwise, the gimbal may become damaged.
4. The K1 is **NOT water resistant**. DO NOT use any liquid cleansers. Only use a soft dry cloth to clean the K1.
5. Keep the K1 away from sand and dust to safeguard the sensors in the camera and motors.
6. **DO NOT** use the K1 with **Pole/Selfie Stick**.

Notice

1. Hold the K1 still when it is powering up to ensure it starts up successfully.
2. Check the camera settings before start to shoot.

FCC Compliance Notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of FCC rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Change or modifications that are not expressly approved by the manufacturer could void the user's authority to operate the equipment.

RF Exposure Information

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20cm during normal operation.

EU Compliance Statement

Essel-T Co., Ltd (d.b.a REMOVU) hereby declares that this device is in compliance with the essential requirements and other relevant provisions of the R&TTE Directive.

Smart Battery Safety Guidelines

Notice

All instructions and other collateral documents are subject to change at the sole discretion of Essel-T Co., Ltd (d.b.a REMOVU). For up-to-date product information, visit <http://www.removu.com>.

Warning

To avoid fire, serious injury, and property damage, observe the following safety guidelines when using, charging, or storing your batteries.

Battery Use

1. DO NOT allow the batteries to meet any kind of liquid. DO NOT leave batteries out in the rain or near a source of moisture. DO NOT drop the battery into water. If the inside of the battery comes into contact with water, chemical decomposition may occur, potentially resulting in the battery catching on fire, and may even lead to an explosion.
2. If the battery falls into water by accident, put it in a safe and open area immediately. Maintain a safe distance from the battery until it is completely dry. Never use the battery again, and dispose of the battery properly as described in the Battery Disposal section below.
3. Put out any battery fire using water, sand, fire blanket or a dry powder fire extinguisher.
4. Never use non-REMOVU batteries. REMOVU DO NOT take responsibility for any damage caused by non-REMOVU batteries.
5. Never use or charge swollen, leaky, or damaged batteries. If your batteries are abnormal, contact REMOVU or a REMOVU distributor for further assistance.
6. The battery should be used in temperatures from 0°C to 40°C. Use of the battery in environments above 40°C can lead to a fire or explosion. Use of battery below 0°C can lead to permanent damage.
7. DO NOT use the battery in strong electrostatic or electromagnetic environments. Otherwise, the battery control board may malfunction.
8. Never disassemble or pierce the battery in any way or the battery may leak, catch fire, or explode.
9. DO NOT drop or strike batteries. DO NOT place heavy objects on the batteries. DO NOT pressure any physical shock into the battery.
10. Electrolytes in the battery are highly corrosive. In case of leakage of the battery, DO NOT expose your skin or eye to the electrolytes. If exposed, immediately wash the affected area with fresh running water for at least 15 minutes, and then see a doctor immediately.
11. DO NOT use the battery if it received impact from a fall or other accidents.
12. DO NOT heat batteries. DO NOT dry the battery with an external heat source such as a microwave oven or hair dryer.
13. DO NOT manually short-circuit the battery.
14. Clean battery terminals with a clean, dry cloth.

Battery Charging

1. Charge battery by 5V/2A adaptor.
2. Never leave the battery unattended during charging. DO NOT charge the battery near flammable materials or on flammable surfaces such as carpet or wood.
3. DO NOT overcharge the battery, if the battery is not used for a long time.

Battery Storage

1. Keep batteries out of the reach of children and pets.
2. DO NOT leave the battery near heat sources such as a furnace or heater. DO NOT leave the batteries inside of a vehicle on hot days. The ideal storage temperature is 22°C-28°C.

3. Always keep the battery in a dry place.
4. DO NOT store the battery fully discharged for long periods of time, otherwise it will over discharge and lead to permanent damage.
5. DO NOT store in a box or drawer in which there are other metal materials or coins. It might cause a short circuit.
6. DO NOT store the battery with metal materials such as coins, keys, jewelry and hairpins. It might cause fire, if the battery's slot is contacted with metal materials.

Battery Maintenance

1. Never use the battery when the temperature is too high or too low.
2. Never store the battery in environments with a temperature higher than 60°C.

Travel Notice

1. Before carrying the Smart Battery on an airline flight, it must first be fully discharged. Only discharge the battery in a fireproof location. Store Smart Batteries in a ventilated location.
2. Keep the battery away from metal objects such as glasses, watches, jewelry, and hairpins.
3. Never transport a damaged battery or a battery with power level higher than 50%.

Battery Disposal

Most rechargeable Li-Polymer batteries are classified as non-hazardous waste and are safe for disposal in the normal municipal waste stream. Many localities have laws in place requiring battery recycling. Check your local laws to make sure that you can dispose of rechargeable batteries in your regular trash. To safely dispose of Li-Polymer batteries, protect terminals from exposure to other metal with packing, masking or electrical tape so they DO NOT cause a fire while being transported. Never dispose of a battery in a fire because it may explode.

Notice

1. Make sure the batteries are fully charged before using.
2. The Smart Battery is designed to stop charging when it is full. However, it is a good practice to monitor the charging progress and disconnect the batteries when fully charged.
3. Discharge the battery to 50% if it will NOT be used for 10 days or more. This can greatly extend the battery life.
4. The battery will go into hibernation mode, in which it cannot be used directly, if it is depleted or after long periods of inactivity. Recharge the battery to bring it out of hibernation mode.
5. Remove batteries from the device when stored for an extended period.
6. Never Over-discharge, as this may lead to battery cell damage.
7. Battery life may be reduced if not used for a long time.
8. Discharge and charge the battery completely once every three months to keep it in good condition.

For more information, read the User Manual:

<http://www.removu.com/k1>

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